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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|---------------------------|---------------------|------------------|
| 10/659,630 | 09/10/2003 | Todd Christopher Adelmann | 200208961-1 | 5595 |
| 22879 | 7590 | 06/13/2006 | EXAMINER | |
| HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400 | | | | CHUNG, PHUNG M |
| ART UNIT | | PAPER NUMBER | | |
| | | 2138 | | |

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|----------------------------|------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/659,630 | ADELMANN ET AL. | |
| | Examiner Phung My Chung | Art Unit 2138 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/10/03.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____.

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Specification of the disclosure

1. Page 20, line 8 of the specification, "serial number-----, attorney docket number HPDNO: 10014286-1, filed -----," the serial number and/or the patent number if applied with the filing date is missing. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-2, 5-15, 19, 22-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al (7,036,068).

As per claims 1-2 and 5-11, Davis et al disclose a memory comprising:
an array (10) of memory cells (16); and

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a control circuit (20) configured to read error correction coded data from the array of memory cells, provide error correction decoding to selected error correction coded data and discard unused error correction code of unselected error correction coded data. (Fig. 1, col. 3, line42 to col. 5, line 67). Davis et al does not disclose that an unused error correction code data is an error correction code parity data. However, Davis et al disclose the error correction code can be either BCH or Reed-Solomon or both (col. 5, lines 58-62 and col. 6, lines 6-24). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention, to include an error correction code data as the error correction code parity data or as Reed-Solomon or BCH error correction code data as desired if needed.

As per claims 12-15, 19, 22-26 and 29, these claims are rejected under similar rationale as set forth in claims 1-2 and 5-11.

4. Claims 3, 16 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al (7,036,068) as applied to claims 1-2, 5-15, 19, 22-26 and 29 above, and further in view of Weng et al (5,428,630).

Claims 3, 16 and 27-28, the teaching of Davis et al have been discussed above. They do not disclose. They do not disclose a CRC checksum of the ECC encoded data. However, Weng et al disclose the CRC checksum of the ECC encoded data (col.4, lines 25-63). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the CRC checksum of the ECC encoded data as taught by Weng et al into the ECC encoded data of Davis et al so that error in the data word can be detect and correct.

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5. Claims 4 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al (7,036,068) as applied to claims 1-2, 5-15, 19, 22-26 and 29 above, and further in view of Sridharan et al (6,738,942).

Claims 4 and 21-22, the teaching of Davis et al have been discussed above. They do not disclose that the ECC encoded data including parity check. However, Sridharan et al disclose that the error encoded data including a odd/even parity check. However, Sridharan et al disclose an odd/even parity check (4). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the parity check as taught by Sridharan et al into the error correction check code or Davis so that burst errors can be detected and corrected.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is 571-272-3818. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decay can be reached on 571- 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phung My Chung
Primary Patent Examiner